SRM –

IUBMB Enzyme Nomenclature

EC 2.7.6.1

Common name: ribose-phosphate diphosphokinase

Reaction: ATP + D-ribose 5-phosphate = AMP + 5-phospho-α-D-ribose 1-diphosphate

For diagram of reaction click here.

Other name(s): ribose-phosphate pyrophosphokinase; PRPP synthetase; phosphoribosylpyrophosphate synthetase; PPRibP synthetase; PP-ribose P synthetase; 5-phosphoribosyl-1-pyrophosphate synthetase; 5-phosphoribose pyrophosphorylase; 5-phosphoribosyl-alpha-1-pyrophosphate synthetase; phosphoribosyl-diphosphate synthetase; phosphoribosylpyrophosphate synthase; pyrophosphoribosylphosphate synthetase; ribophosphate pyrophosphokinase; ribose-5-phosphate pyrophosphokinase

Systematic name: ATP:D-ribose-5-phosphate diphosphotransferase

Comments: dATP can also act as donor.

Links to other databases: BRENDA, EXPASY, GTD, KEGG, WIT, CAS registry number: 9015-83-2

References:

1. Hughes, D.E. and Williamson, D.H. Some properties of glutaminase of *Clostridium welchii*. *Biochem. J.* 51 (1952) 45-55.

2. Hurlbert, R.B. and Reichard, P. The conversion of orotic acid to uridine nucleotides *in vitro*. *Acta Chem. Scand.* 9 (1955) 251-262.

3. Remy, C.N., Remy, W.T. and Buchanan, J.M. Biosynthesis of the purines. VIII. Enzymatic synthesis and utilization of α-5-phosphoribosylpyrophosphate. *J. Biol. Chem.* 217 (1955) 885-895.

4. Switzer, R.L. Regulation and mechanism of phosphoribosylpyrophosphate synthetase. I. Purification and properties of the enzyme from *Salmonella typhimurium*. *J. Biol. Chem.* 244 (1969) 2854-2863. [Medline UI: 69193742]

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